数学与系统科学研究院学术报告

报告题目：Prediction-Error Approximation by Convex Optimization

报 告 人：Professor Anders Lindquist, Department of Mathematics, Royal Institute of Technology

时间地点：2007 年 10 月 15 日上午 10：00—11：30，思源楼 712

摘要：

In this talk we show that in large model classes of ARMA models, as well as in some model classes of nonrational functions, prediction-error approximation leads to convex optimization. The connections to Kullback-Leibler and maximum-likelihood criteria are described. Model classes defined in terms of interpolation conditions are also considered, connecting to recent literature in numerical linear algebra.

报告人简介及联系方式：

Anders Lindquist received his PhD degree from the Royal Institute of Technology, Stockholm, Sweden, where in 1972 he was appointed a Docent of Optimization and Systems Theory. From 1972 to 1974 he held visiting positions at the University of Florida, Brown University, and State University of New York at Albany. In 1974 he became an Associate Professor, and in 1980 a (full) Professor of Mathematics at the University of Kentucky, where he remained until 1983. He is now a Professor at the Royal Institute of Technology, where in 1982 he was appointed to the Chair of Optimization and Systems Theory. Since then he has also held visiting positions at the University of Padova and Consiglio Nazionale delle Ricerche, Italy, Arizona State University, International Institute of Applied Systems Analysis, Vienna, Russian Academy of Sciences, Moscow, East China Normal University, Shanghai, Technion, Haifa, University of California at Berkeley, and University of Kyoto, Japan.

Presently, Anders Lindquist is the Chairman of the Mathematics Department at the Royal Institute of Technology. He is a Member of the Royal Swedish Academy of Engineering Sciences, a Foreign Member of the Russian Academy of Natural Sciences, a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), and an Honorary Member the Hungarian Operations Research Society. He is an Affiliate Professor at Washington University, St Louis (since 1989), an Advisory Board Member of the Institute for Mathematics of the Life Sciences, Texas Tech University, and a member of the Board of Governors of the Israel Institute of Technology (Technion) in Haifa. For the first half of 2003, he served as the scientific leader at Institut Mittag-Leffler.

Lindquist has served on many editorial boards of journals, among them the Journal of Mathematical Systems, Estimation, and Control (Communicating Editor), Systems and Control Letters, Adaptive Control and Signal Processing, Acta Automatica Sinica, and book series, namely Systems and Control: Foundations and Applications, Applied and Computational Control, Signals, and Circuits, and Progress in Systems and Control. Since 1983 he has been a member, and between 1985 and 1987 the chairman, of the steering committee for the biennial international symposia on the Mathematical Theory of Networks and Systems (MTNS).

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